

CLAIMS

1. A method of separating a pancreatic stem cell from the pancreas of a mammal using two or more kinds of substances having specific affinity for a marker protein selected from
5 the group consisting of c-Met, c-Kit, CD45 and TER119, or a gene encoding the same.
2. A method of separating a pancreatic stem cell from the pancreas of a mammal using two or more kinds of substances
10 having specific affinity for a marker protein selected from the group consisting of c-Met, c-Kit, CD45, TER119 and Flk-1, or a gene encoding the same.
3. The method of claim 1 or 2, wherein the substance having
15 specific affinity is an antibody against the marker protein.
4. A method of identifying a pancreatic stem cell of a mammal using two or more kinds of substances having specific affinity for a marker protein selected from the group consisting of c-
20 Met, c-Kit, CD45 and TER119, or a gene encoding the same.
5. A method of identifying a pancreatic stem cell of a mammal using two or more kinds of substances having specific affinity for a marker protein selected from the group consisting of c-
25 Met, c-Kit, CD45, TER119 and Flk-1, or a gene encoding the same.
6. The method of claim 4 or 5, wherein the substance having specific affinity is an antibody against the marker protein.
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7. A method of separating a pancreatic stem cell from the pancreas of a mammal, which comprises a step of analyzing the expression state of two or more marker proteins selected from

the group consisting of c-Met, c-Kit, CD45 and TER119, or a gene encoding the same.

8. A method of separating a pancreatic stem cell from the
5 pancreas of a mammal, which comprises a step of analyzing the expression state of two or more marker proteins selected from the group consisting of c-Met, c-Kit, CD45, TER119 and Flk-1, or a gene encoding the same.

10 9. A method of identifying a pancreatic stem cell from the pancreas of a mammal, which comprises a step of analyzing the expression state of two or more marker proteins selected from the group consisting of c-Met, c-Kit, CD45 and TER119, or a gene encoding the same.

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10. A method of identifying a pancreatic stem cell from the pancreas of a mammal, which comprises a step of analyzing the expression state of two or more marker proteins selected from the group consisting of c-Met, c-Kit, CD45, TER119 and Flk-1,
20 or a gene encoding the same.

11. A pancreatic stem cell that can be separated from the pancreas of a mammal by the method described in any of claims 1, 2, 7 and 8.

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12. The pancreatic stem cell of claim 11, which shows 4 markers of c-Met, c-Kit, CD45 and TER119 in a pattern of c-Met⁺, c-Kit⁻, CD45⁻, TER119⁻.

30 13. The pancreatic stem cell of claim 11, which shows 5 markers of c-Met, c-Kit, CD45, TER119 and Flk-1 in a pattern of c-Met⁺, c-Kit⁻, CD45⁻, TER119⁻, Flk-1⁻.

14. An agent for the prophylaxis or treatment of a pancreatic hypofunctional disease, which comprises the pancreatic stem cell of claim 12 or 13, or a cell differentiated from the stem cell.

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15. An agent for the prophylaxis or treatment of a hypofunctional disease of the liver · bile duct or the stomach · intestine, which comprises the pancreatic stem cell of claim 12 or 13, or a cell differentiated from the stem cell.

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16. A method of screening a substance that induces differentiation of a pancreatic stem cell of a mammal, which comprises the following steps:

(i) a step of reacting a pancreatic stem cell with a test
15 substance, and

(ii) a step of determining the expression of a pancreatic marker in the cell after the reaction.

17. A method of screening a substance that induces
20 differentiation into liver · bile duct or stomach · intestine of a mammal, which comprises the following steps:

(i) a step of reacting a pancreatic stem cell of claim 12 or 13 with a test substance, and

(ii) a step of determining the expression of a liver · bile duct
25 or stomach · intestine marker in the cell after the reaction.

18. A method of screening a substance that regulates a pancreatic function of a mammal, which comprises the following steps:

30 (i) a step of reacting a pancreatic stem cell or a cell differentiated from the stem cell with a test substance, and

(ii) a step of determining the expression of a pancreatic marker in the cell after the reaction.

19. A method of screening a substance that regulates the function of liver· bile duct or stomach · intestine of a mammal, which comprises the following steps:

- 5 (i) a step of reacting a pancreatic stem cell of claim 12 or 13 or a cell differentiated from the stem cell with a test substance, and
- (ii) a step of determining the expression of a liver· bile duct or stomach · intestine marker in the cell after the reaction.

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